

Mercury Refining Site Proposed *De Minimis* Settlement Response to Comments

This document responds to significant comments received by EPA regarding a proposed *de minimis* settlement at the Mercury Refining Superfund Site (“Site”). The terms of the proposed settlement were embodied in a proposed administrative order on consent (“2006 Proposed AOC”), pursuant to Section 122(g) of the Comprehensive Environmental Response, Compensation, and Liability Act, (“CERCLA”), 42 U.S.C. §§ 9622(g). The 2006 Proposed AOC was not finalized. These were the only comments EPA received in response to its request for public comment, published on August 23, 2006 in the *Federal Register* (71 Fed. Reg. 163, 49450), regarding the proposed settlement.

I. Background

From the 1950s through 1998, the Site was used by the Mercury Refining Company, Inc. (“Mereco”) as a mercury reclamation facility. During operations at the Site, special “retort” ovens were used to heat mercury and/or mercury-containing materials (“MCM”) and recover elemental mercury, which was then further processed and refined on the Site. Through the mercury reclamation process, hazardous substances came to be disposed of at the Site. The Site was placed on the National Priorities List (“NPL”) in 1983 and the New York State Department of Environmental Conservation (“NYSDEC”) became the lead agency for clean-up and enforcement at the Site. Pursuant to a 1985 CERCLA consent decree between Mereco and New York State, Mereco performed some cleanup actions at the Site, however there were continuing releases from site operations and fires. From 1989 through late 1999, Mereco entered into a number of agreements with NYSDEC to study and clean-up the Site. Additionally, in 1996, NYSDEC issued a corrective action permit under RCRA.

Because Mereco failed to fulfill all of its obligations to NYSDEC, in November 1999, NYSDEC ordered Mereco to cease all cleanup work at the Site and requested that EPA take over as the lead agency for cleanup and enforcement at the Site under the Superfund program. EPA has since performed a remedial investigation/feasibility study (“RI/FS”), issued a Proposed Plan and sought public comment, and on September 30, 2008, issued the Record of Decision (“ROD”) which included a responsiveness summary.

EPA conducted an extensive potentially responsible party (“PRP”) search which included analyzing Mereco’s business records and entering the information from those records into a computerized database. This database was used in preparing a waste-in list. When EPA made the *de minimis* settlement offer in 2005, EPA’s database contained information on 2,726 contributors who sent a total of 7,506,275 pounds of mercury and MCM to the Site. Of these 2,726 contributors, 1,970 were exempt from liability under Section 107(o) of CERCLA, 42 U.S.C. §9607(o), because they sent a *de micromis* amount of mercury and/or MCM to the Site. Of the remaining 756 contributors, EPA was able to locate 580 contributors. Of the locatable contributors, 172 sent batteries to the Site, and of those 172 locatable contributors, 133 parties

sent only batteries to the Site and 39 parties sent both batteries and non-batteries. At that time, EPA determined that parties who sent batteries to the Site would likely satisfy their burden under the Superfund Recycling Equities Act (“SREA”), Section 127 of CERCLA, 42 U.S.C. §9627, and could therefore successfully argue they are exempt from liability. Additionally EPA did not include in the waste-in list the battery contributions of the 39 locatable parties who sent both battery and non-battery waste. With elimination of the batteries, EPA was left with a total of 445 locatable, non-*de micromis*, non-battery-only parties.¹ EPA called these parties “Contributing Parties” and the mercury they sent to the Site “Contributing Waste.” Of these 445 parties, 20 were considered major parties because they individually sent more than 1% of the mercury and/or mercury-containing material to the Site. The remaining 425 parties were considered *de minimis* by EPA.

On October 26, 2005, EPA sent a letter to the 425 proposed *de minimis* parties notifying them of their status as *de minimis* parties and offering them the opportunity to settle with EPA. Each of these parties individually sent less than 1% of the Contributing Waste to the Site. Collectively, these 425 parties sent 30% of the Contributing Waste to the Site. Simultaneously, EPA sent general notice letters to the 20 major parties informing them of their liability for the Site and providing them with notice of the impending *de minimis* settlement offer.

Of the 425 parties who were sent the *de minimis* settlement offers, 292 parties signed the AOC. Of the 131 parties that did not sign the AOC, 24 parties challenged their liability arguing that they are excused because of a prior bankruptcy, because EPA’s records contained inaccurate waste-in information, or because EPA had the wrong party. EPA reviewed the claims of these 24 parties and decided not to pursue them further. Sixty-five letters were returned by the U.S. Postal Service as undeliverable and eight recipients returned the package informing EPA that they received it in error. EPA reviewed the address information for these parties and included the parties for which a valid address could be located in a revised settlement offer.

Each *de minimis* party’s individual settlement amount was calculated by multiplying the number of pounds of Contributing Waste it sent to the Site by \$2.47 per pound. EPA calculated this price per pound by adding: 1) EPA’s unreimbursed response costs through February 28, 2005; 2) estimated “interim costs” including estimated costs to complete the feasibility study (“FS”) and prepare the proposed plan and ROD; 3) the then-anticipated future RD/RA costs including EPA’s future oversight costs; and, 4) a 100% premium on all future costs to cover cost overruns or remedy failure. EPA then subtracted out a 6.6% orphan share, then divided by the total number of pounds of Contributing Waste sent to the Site.²

¹Note that if you subtract the number of parties that sent only batteries to the Site (133) from the total non-*de micromis* locatable parties (580) you get 447 not 445. The 447 includes two parties who each sent battery and non-battery waste to the Site in *de micromis* quantities when calculated separately but when combined, their totals exceed the 200 lb. threshold.

² Note that this methodology was employed in the prior (2005) *de minimis* settlement offer. The methodology has been changed for the revised *de minimis* settlement offer being made

II. Response to Comments

1. Comment: EPA's waste-in list and volumetric rankings are not accurate as EPA included in its calculations materials that do not meet the definition of 'hazardous substance' under CERCLA §101(14). Such an approach is not consistent with EPA's guidance on developing waste-in lists which states that EPA must first determine the approximate amount of hazardous substances in the waste streams brought to the Site by each party and then develop a volumetric ranking. EPA cannot simply use the weight of non-hazardous substances to prepare the volumetric ranking. EPA is not authorized to enter into *de minimis* settlements with PRPs based on their contributions of non-hazardous substances to a Site and thus EPA's settlements are inappropriate and not in accordance with CERCLA §122.

Response: EPA's waste-in list and volumetric rankings were calculated and developed utilizing the information available to EPA regarding the materials delivered to the Site. In order to create the waste-in list, EPA focused its inquiry on the mercury and mercury-containing materials that were sent to the Site. To create its waste-in list, EPA obtained all of Mereco's records and entered the data into a database. In creating its waste-in list, EPA utilized the total weight of the material sent to the Site from each potentially responsible party ("PRP") because, as discussed below, EPA could not reliably or consistently determine the amount of mercury contained in each shipment. This approach is consistent with EPA's February 22, 1991 guidance entitled "Final Guidance on Preparing Waste-in Lists and Volumetric Rankings for Release to Potentially Responsible Parties (PRPs) Under CERCA" ("Waste-In Guidance"). This guidance instructs Regions to develop an approach for assessing waste-in information that is internally consistent and based on a common set of considerations. One such assumption identified in the guidance is that hazardous and nonhazardous substances, if mixed together, should be considered hazardous and should be included in their entirety on waste-in and volumetric lists. This approach is consistent with case law as well (see below).

While creating its waste-in list initially, and in light of the comments received on the *de minimis* settlement, as discussed further in response to Comment 2 below, EPA attempted to determine the amount of mercury contained in each shipment. However, such a breakdown could not be reliably made. With very limited exceptions, records relied upon to develop EPA's database do not contain information on the amount of mercury contained in each shipment. The underlying documents in the files upon which the database is based identify over fifty different "waste-types" which were processed by Mereco. Based on information obtained from Mereco and EPA personnel, it was determined that the amount of mercury contained within a particular waste-type (e.g., manometer, battery, thermometer) varied from manufacturer to manufacturer of the waste type. Also, depending on when the item was manufactured, the amount of mercury utilized in a particular product varied due to the cost of mercury at the time of manufacture as well as regulations which were promulgated regarding mercury use and disposal. Even if EPA were to attempt to estimate the amount of mercury contained in each waste-type, there is insufficient

based on changes to the waste-in list due, in part, to the comments received on the 2005 settlement offer.

information contained in documentary evidence to determine the condition of the shipment at the time the shipment reached Mereco or at the time the shipment was processed. For example, in the case of pressure regulators that were processed at the Site, EPA learned from Mr. Leo Cohen, President and founder of Mereco, that to process the pressure regulators, Mereco built a machine which crushed the pressure regulators thereby releasing the mercury. The entire crushed pressure regulator was then placed into the retort and the mercury was reclaimed. Thus the non-mercury components became contaminated with mercury. For the foregoing reasons, EPA decided that in order to treat all parties similarly, EPA would utilize the total weight of the material shipped to the Site and not the weight of the mercury contained therein. The commentors seek for EPA to make assumptions about the evidence which is not contained in the documents in EPA's files. To have made such assumptions beyond those supported by the physical documentation would have been unreasonable. Moreover, as noted and with only one exception (see response to Comment 9 below), EPA applied this methodology in a thoroughly consistent manner as to all PRPs, from the lowest volume *de minimis* PRPs to the highest volume major PRPs. See also response to Comment 2 below.

EPA recognizes that there are many ways to establish and organize a waste-in list. As stated by the Court in *U.S. v. Cannons Engineering Corp.*, 899 F. 2d 79 (1st Cir. 1990), regarding the claim that EPA should have used one method for determining proportionate liability over another (relative toxicity versus a strict volumetric ranking): “[h]aving selected a reasonable method of weighing comparative fault, the agency need not show that it is the best, or even the fairest, of all conceivable methods. The choice of the yardstick to be used for allocating liability must be left primarily to the expert discretion of the EPA, particularly when the PRPs involved are numerous and the situation is complex.” *Cannons* at 88. EPA believes it reasonably developed a waste-in list in that all parties are treated equally given the inherent limitations of the information available.

The commentors also state that EPA's waste-in list is not accurate because it includes materials that are not hazardous substances as defined in Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”), 42 U.S.C. §9601(14). Utilizing the total weight of the material sent to the Site as opposed to just the weight of the mercury contained therein is not only consistent with EPA guidance but also with case law on this issue. As stated above and below in response to Comment 2, in most cases, EPA was unable to determine the amount of mercury contained in each particular shipment to the Site. However, Courts have recognized that when hazardous and non-hazardous substances are combined the whole product is addressed as a hazardous substance. “When a mixture or waste solution contains hazardous substances, that mixture is itself hazardous for purposes of determining CERCLA liability.” *B.F. Goodrich Co. v. Murtha*, 958 F.2d 1192, 1201 (2d Cir. 1992). Similar arguments have been made with regards to very low concentration of hazardous substances in large volumes of liquid which have also been rejected by the courts. In *United States v. Alcan Aluminum Corp.*, 990 F.2d 711(2d Cir. 1993) the defendant claimed that the concentrations of hazardous substances in its waste emulsion were insufficient to constitute hazardous substances under CERCLA. The Second Circuit noted that liability under CERCLA attaches regardless of the concentration of the hazardous substances present in a defendant's waste. As stated by the

Court, “[T]he absence of such quantity requirements in CERCLA leads inevitably to the conclusion that Congress planned for the ‘hazardous substance’ definition to include even minimal amounts of pollution.” 990 F.2d at 720. Thus, since mercury is a hazardous substance under CERCLA, items containing mercury, regardless of the amount of mercury contained in such items, can be addressed under hazardous substance authorities.

2. Comment: EPA could have estimated the mercury content in each waste stream and each waste shipment utilizing the information contained in the Mereco generator waste profile sheets (“Waste Profiles”). EPA could have utilized a tiered approach to determining mercury content utilizing first the quantity of mercury recovered where available, followed by an entity-specific average of mercury recovered from a distinct entity-specific waste stream, followed by the quantity of mercury identified from Waste Profiles or other shipment-specific document, and then finally the average of the percentages of mercury identified on the Waste Profiles which report the same type of waste stream.

Response: Neither the Waste Profiles nor the Certificates of Destruction (identifying mercury recovered) are sufficiently reliable to estimate the amount of mercury sent to the Site with each shipment and therefore EPA did not base the waste-in list on the information contained in these documents.

Of the 31,394 documents used to create the database, covering 12,947 transactions, only 562 are the Waste Profiles to which the commentators refer. Thus, EPA has Waste Profiles for only 4.34% of Mereco’s transactions for which EPA has evidence. With respect to Contributing Parties, EPA has Waste Profiles on 376 of the 4,924 transactions, which is only 7.6% of these transactions. Based on information obtained from discussions with Mereco personnel, including a deposition of Leo Cohen, Mereco’s founder and President, EPA determined that these Waste Profiles were generated based on information provided by the generators and contained general information about the likely waste to be sent to the Site. And, for regular customers, these Waste Profiles were often filled out once, covering material it expected to send to the Site over the course of many years. Not only do these Waste Profiles contain only estimates of the amount of mercury contained in an item, they also do not necessarily bear any relationship to the actual shipments that were sent to the Site, nor the condition of the material received at the facility. According to Mereco personnel, the purpose of the Waste Profiles was to ensure that Mereco was able to process the general type of material that the generator wished to send.

Additionally, the Waste Profiles reflect a wide range of mercury content for the same waste type sent to the Site. For instance, EPA has Waste Profiles for materials from spill cleanups which identify a mercury content of <1% and Waste Profiles for such materials which identify a mercury content of 100%. It would be impossible to determine with more specificity the actual amount of mercury contained in a shipment of spill debris based on these or any other Site documents. Similar discrepancies can be found for most waste types. For example, mercury in manometers range from between <1% to 20%, thermometers range from .5% to 20%, and switches range from <2% to 25%. Yet another problem with using the Waste Profiles to determine the amount of mercury contained in a particular item is that often the Waste Profile is inconclusive, and in some

instances, sloppily prepared. For instance, many Waste Profiles state “1-100%” as the amount of mercury contained in a particular item, many include one percentage value for an assortment of items, and many state 100% for the mercury content of items which, based on the documents themselves could not contain 100% mercury (*e.g.* “Batteries 100% or Crushed/broken light bulbs 100%).

Often the mercury content contained on the Waste Profiles for a particular MCM differs from the mercury content for that same MCM provided to EPA by Mr. Cohen. For instance, Mr. Cohen stated that the term “switches” could be used to identify a number of different MCM items. He said that barometers were often called switches and they contain 60% mercury whereas other items denominated as switches could contain from 5-50% mercury depending on the type of switch. With regard to ignitron tubes, another type of MCM, Mr. Cohen stated that they came in all sizes, each containing varying amounts of mercury. He stated that a 3-4 lb. ignitron tube could contain ½ lb of mercury or 50-75% mercury, while a larger ignitron tube contains far less mercury by weight. With regard to pressure regulators, yet another type of MCM, some of the Waste Profiles state that mercury regulators or pressure regulators contain 1% mercury, however Mr. Cohen stated that many pressure regulators weighed a total of 7-20 lbs but contained ¼ - ½ lb of mercury per pound of such device, or 4 to 25% mercury.

EPA has very few Waste Profiles upon which to rely and the Waste Profiles give no specifics as to the size, age, manufacturer or type of a particular MCM so there is no way to reliably extrapolate from them. A commentor suggested that EPA take an average of the percentages included on the Waste Profiles for a particular MCM to determine the mercury content for that particular MCM. For EPA to utilize such an average would be arbitrary and inconsistent with EPA guidance. EPA also would have to extrapolate such information over all shipments to the Site for a particular MCM which would inject a high degree of uncertainty into the waste-in list.

One commentor suggested that EPA utilize the Certificates of Destruction to determine the amount of mercury contained in a particular waste type. These documents, when they are available, identify the amount of mercury recovered after the retorting process was completed. They do not indicate the amount of mercury which came into the facility or in any way reflect the amount that was released. Thus, the Certificates of Destruction exclude the very mercury creating the environmental problems at the Site. According to information obtained by EPA from discussions with Mereco personnel, there were few instances where a customer would send mercury or MCM to the Site, followed by Mereco processing that specific material and returning it to the customer. Instead, for the most part, Mereco personnel would create a “soup” of different mercury-containing items on hand at any given time so as to maximize the efficiency of the retorting process. Thus the amount of mercury that was reclaimed after items were retorted would not even necessarily have any bearing on the amount of mercury that was sent to the Site by a particular customer. Additionally, as with the Waste Profiles, the Certificates of Destruction do not provide sufficient information to account for the varying amounts of mercury contained within a particular waste type.

3. Comment: The top 62 parties on EPA’s waste-in list sent 90% of the gross weight of the

wastes to the Site. EPA should thus determine the relative contribution of mercury by each of these top 62 parties which should provide EPA with sufficient information to reasonably estimate the total quantity of hazardous substances (mercury) brought to the Site during this time period. EPA should then establish an appropriate 1% *de minimis* cut-off based on the total quantity of mercury sent to the Site. Those PRPs whose total shipment of materials is equal to or less than the 1% *de minimis* cut-off will be *de minimis* parties without further consideration of the mercury content of their waste.

Response: As discussed in greater detail in EPA's responses to Comments 1 and 2 above, EPA created its waste-in list and volumetric ranking based upon the amount of mercury and MCM that all locatable, non-*de micromis*, non-battery-only parties sent to the Site. This approach was based on documentary evidence of the weight of the material that each of these 445 parties sent to the Site. Such an approach is fair and consistent with EPA guidance and case law. As noted in response to Comments 1 and 2 above, there is insufficient information for EPA to reliably determine the relative amounts of mercury sent by each of the top 62 parties. Additionally, our *de minimis* policy and our settlement policy don't have a strict cut-off and there is no basis to exclude parties.

4. Comment: EPA's information gathering efforts were inadequate and EPA could have obtained better and more accurate information on the amount of mercury sent to the Site using its information gathering authority under CERCLA §104(e). Specifically, EPA should have sent information request letters to the PRPs to obtain the Certificates of Destruction which would have indicated the actual amount of mercury obtained from each shipment. In addition, EPA should have made a better attempt to quantify the amount of mercury sent to the Site for the 30 years before hazardous waste manifests were required. To not have done so is unfair and "gives a pass" to parties who sent mercury to the Site in the pre-RCRA era.

Response: Pursuant to an information request letter sent to Mereco in accordance with Section 104(e) of CERCLA, Mereco supplied EPA with all of the customer records it had in its possession (over 50 boxes of files documenting the waste streams of its approximately 3,000 customers spanning over 40 years of operation) and EPA created a database to manage and sort this information. EPA does not believe that it could have obtained better or more accurate information on the amount of mercury sent to the Site even if it had sent information request letters to all potentially responsible parties nor is there a requirement that EPA undertake such a comprehensive search. In fact, the courts, in recognizing the need to encourage voluntary settlement between EPA and PRPs, have never required EPA to do an exhaustive and expensive search for documents. If the courts were to require EPA to conduct an exhaustive search, "there would be no incentive for the EPA to enter into such settlements since by doing so they would not decrease their enforcement costs but, indeed, have to take on the burden of showing that the settling parties paid their equitable share." *United States v. Rohm & Haas Co.*, 721 F. Supp. 666, 679 quoting *In re Acushnet River & New Bedford Harbor*, 712 F. Supp. 1019, 1027. Furthermore, to conduct an exhaustive search for documents would duplicate the aspects and expense of litigation that settlement was designed to avoid. *United States v. Rohm & Haas Co.*, 721 F. Supp. 666, 679.

The commentor also suggests that EPA should have sent information request letters to obtain the Certificates of Destruction which, they argue, would indicate the actual amount of mercury obtained from each shipment. As discussed more fully in response to Comment 2 above, EPA does not believe that these documents, even if they could have been obtained from the majority of parties on the majority of transactions, would have provided useful information.

Finally, the commentor states that EPA should have better quantified the amount of waste sent to the Site before 1980 when hazardous waste manifests were required. Mereco sent EPA all of its records, including records documenting shipments sent to the Site before manifests were required. Some of these pre-1980 transactions are well documented by internal Mereco records, shipping receipts, contracts, etc., some are not easy to interpret. EPA utilized whatever reliable information was contained in these pre-1980 documents and included these transactions and associated parties in its database. Those locatable parties who sent more than 200 lbs. of mercury and/or mercury-bearing materials, which were not otherwise exempt from liability, were included in EPA's waste-in list.

5. Comment: One commentor cited to a specific case, stating that courts have found that EPA's settlements "must be based upon, and roughly correlated with, some acceptable measures of comparative fault, apportioning liability according to rational [text omitted] estimates of how much harm each PRP had done." The commentor further stated that rational estimates of the amount of harm are typically measured by the quantity of hazardous substances a PRP has contributed in comparison to other PRPs. See *U.S. v. Cannons Engineering Corp.*, 899 F. 2d 79 (1st Cir. 1990).

Response: In the quoted passage from *Cannons* the commentor omitted important language, "if necessarily imprecise." The actual quote is "settlement terms must be based upon, and roughly correlated with, some acceptable measure of comparative fault, apportioning liability among the settling parties according to rational (if necessarily imprecise) estimates of how much harm each PRP has done." *Cannons* at 87. The *Cannons* court intentionally left unanswered the degree of precision required in the correlation of liability to fault. Recognizing the need for flexibility, the *Cannons* Court stated that, "not only must the EPA be given leeway to construct the barometer of comparative fault, but the agency must also be accorded flexibility to diverge from an apportionment formula in order to address special factors not conducive to regimented treatment." *Cannons* at 88. Furthermore, the court in *Cannons* specifically rejected "the argument that the EPA should have used relative toxicity as a determinant of proportionate liability for response costs, instead of a strictly volumetric ranking" because EPA "having selected a reasonable method of weighing comparative fault ... need not show that it is the best, or even the fairest, of all conceivable methods. The choice of the yardstick to be used for allocating liability must be left primarily to the expert discretion of the EPA, particularly when the PRPs involved are numerous and the situation is complex." *Id.* at 88; see *United States v. Wallace*, 893 F. Supp. 627, 633. As discussed above, EPA does not have reliable information concerning the amount of mercury contained in each item sent to the Site. As a result of this missing information in the record, EPA has chosen to establish its waste-in list based on weight, which is a reasonable method of measuring comparative fault and is consistent with EPA

guidance. Furthermore, “comparative fault is a factual determination, the best measure of which should be chosen by the EPA based upon their expertise.” *United States v. Cannons Engineering Corp.*, 899 F.2d at 87.

6. Comment: EPA should have looked at RCRA waste codes on the Hazardous Waste Manifests and Mereco’s waste codes to determine the amount of mercury in each shipment.

Response: Neither the RCRA waste codes on the Hazardous Waste Manifests from the Site nor Mereco’s waste codes identify the amount of mercury contained in the waste-type, only the type of material that was sent to the Site. For those wastes that were classified as RCRA characteristic waste, we know that the mercury content was above a certain threshold level, but even this does not tell us the amount of mercury contained in the particular shipment.

7. Comment: PRPs that sent high-volume/low-toxicity waste to the Site bear a disproportionate share of the Site costs than PRPs that sent high-toxicity/low-volume waste to the Site due to EPA’s volumetric ranking.

Response: The commentor appears to be confusing toxicity with concentration. The reference to high toxicity vs. low toxicity is a reference to the amount of mercury contained in the item not the toxicity of the mercury. EPA addressed the concentration argument in responses to Comments 1 and 2 above. As explained on page 8 of EPA’s June 19, 1987 guidance entitled, Interim Guidance on Settlements with De Minimis Waste Contributors under Section 122(g) of SARA, which was cited by the commentor, EPA would have attempted to make adjustments if “[A] PRP disposed of a minimal amount of a waste which is highly more toxic or which exhibits other more serious hazardous effects than other hazardous substances at the site.” In that instance, “[T]hat PRP, despite the minimal amount of his contribution, normally would not qualify for treatment as a de minimis party.” Since all of the PRPs are included based on having sent the same hazardous substance to the Site, there is no difference in toxicity. At the Mereco Site, the toxicity of the mercury sent by a given PRP does not change according to the weight of the item sent to the Site and therefore EPA’s ranking based on weight alone does not create disproportionate shares.

8. Comment: EPA included only non-battery mercury shipments and excluded other non-battery shipments containing CERCLA-listed wastes such as manganese, silver and lead. While the cleanup of mercury is driving the remedy, EPA should not exclude hazardous waste shipments from the waste-in list but include non-hazardous waste (*i.e.* total weight of mercury containing material) in the waste-in list.

Response: Manganese, lead and silver were brought to and processed at the Site. While manganese was detected at the Site above screening levels, the concentration of manganese found at the Site was consistent with background concentrations and therefore no cleanup is required for manganese. Regarding silver and lead, EPA analyzed for these metals during its remedial investigation of the Site. The investigation did not find silver above its screening levels in the groundwater. Lead was detected once in the groundwater at a concentration which slightly

exceeded its groundwater limit. Neither lead nor silver was detected in soil samples. Lead, and to a lesser extent silver, was detected in the sediment in catch basins and in the Unnamed Tributary to Patroon Creek, however, neither EPA's Human Health Risk Assessment nor its Baseline Ecological Risk Assessment found any unacceptable risks due to silver or lead. Therefore, there is no reason to include such shipments in the waste-in list. If the material contained mercury and these other substances, such materials were included on the waste-in list.

9. Comment: The Metropolitan Transportation Authority ("MTA") sent mercury arc rectifiers to the Site which weighed 15,000 pounds each and contained less than 500 pounds of mercury (3.5% of total shipping weight). Mercury was drained out of them and the remainder sold off as scrap by Mereco.

Response: Of the New York City Transportation Authority's ("MTA's") 31 shipments to the Site, eight of these involved eight arc rectifiers that the commentor describes. The rectifiers in the eight shipments were 15,000 to 20,000 pounds each. The remaining 23 MTA shipments contained mercury and other mercury-contaminated materials, including small arc rectifiers. EPA has learned that the eight giant arc rectifiers were indeed treated differently than all other waste that was sent to the Site. According to Mereco's former plant manager, Mereco built a booth in the retort building in which it drained each giant arc rectifier of its mercury, then power washed the remaining steel until wipe samples indicated that it was free of mercury. The remaining steel was then shipped off-Site as scrap metal. Mereco retorted approximately 350 lbs. of mercury plus 150 lbs. of sludge and metal for each giant arc rectifier brought to the Site. Since these items were the only items brought to the Site that were not either retorted or otherwise disposed of on-Site, EPA is counting the weight of each of the eight shipments of giant arc rectifiers as 500 lbs. As to the remaining 23 shipments, since these items were treated the same as all other shipments in that the entire shipment was either retorted or otherwise disposed of on-Site (in this case retorted), EPA is making no adjustment for these shipments with the exception of the adjustment identified in response to comment 18 below.

10. Comment: A 1% cutoff is arbitrary because 1/3 of all EPA *de minimis* settlements place the cut-off at less than 1%.

Response: EPA's July 30, 1993 guidance "Streamlined Approach for Settlements with *De Minimis* Waste Contributors Under CERCLA Section 122(g)(1)(A)", OSWER Directive #9834.7-1D, does not establish a set percentage for *de minimis* cutoffs. Rather it encourages site-specific decisions recognizing that *de minimis* cutoffs have ranged from .07% to 10% nationwide. EPA chose a 1% cut-off because: (a) it is consistent with many other *de minimis* cut-offs used by the Region and nationally; (b) this cut-off results in the *de minimis* parties being responsible for 30% of the locatable, non-battery-only, non-*de micromis* MCM sent to the Site and the *de maximis* parties being responsible for 70% of the locatable, non-*de micromis* MCM; and (c) it leaves a manageable number of *de maximis* parties with whom EPA will attempt to negotiate an RD/RA settlement.

For the revised *de minimis* settlement, EPA is still utilizing 1% as the *de minimis* cutoff however,

after accounting for a discount for materials sent to the Site after February 1994 (see response to comment 15 below), the *de minimis* parties' share is now 23% of the total rather than 30%.

11. Comment: EPA should make equitable adjustments consistent with its decisions at the Tonolli Superfund Site in Pennsylvania (where EPA used volumetric and proportional reductions) and at the Sealand Superfund Site in New York (where EPA made adjustments for volume and discounts for other equitable factors like the proximity of the generator to the Site, unspecified waste disposition and potential nexus). EPA should also make equitable adjustments for parties that sent liquid mercury versus parties that sent other mercury-containing materials to the Site.

Response: Each Site and settlement is unique and fact-specific and therefore comparisons of factors used in one *de minimis* settlement at one Site are not necessarily informative or relevant to another *de minimis* settlement at another Site. For instance, the types of "adjustments" and "equitable factors" referred to with regard to the Sealand Restoration Site *de minimis* settlement are not relevant to a *de minimis* settlement at this Site. At the Sealand site, incomplete documentation resulted in there being a degree of uncertainty regarding the ultimate disposition of waste materials for which some customers arranged for disposal. Some waste was known to have been disposed of at specified locations at the Sealand site, some was only known to have been brought to the site but no disposal disposition was noted, and other transactions failed to reflect any destination for the waste. Because the Sealand site operator was a waste hauler and was known at times to use disposal facilities other than its own, it was not certain that waste in the third, unknown destination category, ever in fact was received at the Sealand facility. These facts caused EPA, in the Sealand case, to make certain adjustments. The adjustments were all made based on varying degrees of certainty that the waste material ever was actually disposed of at the portion of the Sealand facility where remedial work was to be performed, not based on adjustments to a volume of waste which was known to have been received and disposed of at the site. As discussed above, at the Mercury Refining Site, all mercury received at the Site was handled similarly and thus an adjustment based on equity similar to what was done at Sealand would be inappropriate.

With regard to the Tonolli Site in Pennsylvania, we are not aware of any specific adjustments that were made to achieve the *de minimis* settlement. In fact, like at Mereco, to determine a particular party's share, EPA utilized the total weight of the shipment sent to the Site and not the amount of contaminants (in that case lead or cadmium) contained in the shipment. Additionally, EPA reviewed the specific Tonolli documents identified by the commentor and found nothing in the documents which would alter EPA's decision to utilize weight only to develop its waste-in list.

12. Comment: EPA's estimation of its Future Response Costs are insufficient. Specifically the commentor notes:

- a. The PRPs have not been able to vet EPA's future cost data and the underlying assumptions of EPA's estimate of future response costs;
- b. EPA's treatability study and feasibility study are incomplete;

- c. EPA's Proposed Plan for addressing the cleanup of the Site is not complete nor has it been issued for comment; and
- d. Potentially significant cost items such as natural resource damages have yet to be examined and included in EPA's cost estimate.

In addition, the commentor points out that over 80% of EPA *de minimis* settlements are reached after Remedial Design/Remedial Action ("RD/RA") negotiations. The commentor also notes that through this settlement EPA is only collecting approximately \$2,000,000 of the projected \$4,000,000 *de minimis* settlement (because of less than full participation) which will likely put a greater financial burden on the remaining non *de minimis* parties.

Response: Section 122(g)(3) states that *de minimis* settlements shall be reached "as soon as possible" after the information necessary to reach such a settlement is available. EPA's *de minimis* guidance encourages Regions to enter into early *de minimis* settlements, knowing that such settlements would likely be completed prior to the completion of an RI/FS and the issuance of a ROD. When EPA made the original *de minimis* settlement offers it believed it had sufficient information to allow it to enter into the settlement because the RI had been completed and EPA knew what remedial options might be available to be employed. This was factored into EPA's future cost estimate. EPA included a 100% premium to cover, among other things, cost-overruns and remedy failure. This approach was consistent with EPA's June 1992 guidance "Methodology for Early *De Minimis* Waste Contribution Settlements Under CERCLA 122(g)(1)(A)," OSWER Directive 9834.7-1C, where EPA is instructed to utilize itemized past cost summaries and to estimate remaining costs based on reasonable judgment and to include premiums. In any event, the revised *de minimis* settlement offers are being issued after the issuance of the Record of Decision and thus the future cost estimates upon which the revised settlement offers are based, more accurately reflect the expected remedial costs. The revised settlement offer also includes a 100% premium. (See also response to comment 15 below.)

As for the fact that claims for natural resource damages may not as yet have been examined and are not included in EPA's cost estimate, EPA is not a designated Natural Resource Trustee and thus has no authority to either evaluate or settle natural resource damage claims. Moreover, EPA is under no obligation to hold up cost recovery settlements under Section 122 of CERCLA for natural resource damage assessments and claims.

While the majority of all EPA *de minimis* settlements may be reached after Remedial Design/Remedial Action ("RD/RA") negotiations, and there would be more certainty to EPA's future costs if we waited until that stage of the process, due to a number of factors including the sheer number of PRPs associated with this case, it is appropriate to settle with these minor parties prior to concluding RD/RA negotiations.

EPA recognizes that it is obtaining a partial settlement through the *de minimis* settlement. However, this is consistent with the notion that EPA, in the original settlement, was only settling

with *de minimis* parties that sent approximately 30% of the waste to the Site.² Liability under Section 107(a) of CERCLA, is strict, joint and several, a concept which has been affirmed in numerous judicial decisions and jurisdictions. Consequently, all liable parties are responsible for all of the costs incurred by EPA at a site. If, pursuant to Section 122(g) of CERCLA, EPA decides to settle with the *de minimis* parties for an appropriate portion of the costs associated with the Mereco Site, based on rational, albeit rough approximations of their contribution to the Site, EPA is well within its statutory authority to seek the remaining costs from any or all *non-de minimis* liable parties.

13. Comment: EPA has not located all PRPs. EPA listed a party which sent liquid mercury to the Site as ‘unlocatable’ but the commentor was able to locate that party through a ‘google’ search.

Response: As discussed in EPA’s response to Comment 1 above, EPA undertook an extensive PRP search at this Site when the *de minimis* settlement offer was made in 2005, EPA’s database contained evidence on 2,726 contributors who sent mercury and mercury-bearing materials to the Site. After EPA entered the data in its database it employed a number of different search strategies to locate PRPs and determine accurate mailing addresses. This process took almost a year to complete and it included extensive quality control. EPA was then able to verify the addresses by mailing the first *de minimis* settlement offer. In fact, of the 425 *de minimis* settlement offers sent, 65 letters were returned as undeliverable. EPA corrected the addresses for many of these 65 parties. Some were still unlocatable. Those parties that EPA could locate will be included in the revised *de minimis* settlement offer. If additional parties are located in the future, either by EPA or the other PRPs for this Site, then EPA can certainly include them in a subsequent settlement offer.

14. Comment: In August 2006, a Commentor submitted a report entitled, “Electrokinetics Applicability Review, Mercury Refining Superfund Site, Colonie, New York” (“EK Report”) which concluded that electrokinetics (“EK”) is an unproven technology, EK has a poor performance history for mercury remediation, the mercury at the Site is not amenable to EK, bench-scale results have been highly variable, there have been no successful field demonstrations of EK for remediation of mercury under soil conditions similar to those at the Site, and the ability of EK to achieve the cleanup standards in the remedial timeframe is uncertain.

Response: EPA believes that its investigation of EK as a possible alternative to treat the mercury contaminated soils on the Site was consistent with the requirements of the National Contingency Plan (“NCP”). In accordance with the NCP, EPA, in selecting a remedy for a Site, is required to consider technologies that reduce the toxicity and mobility of hazardous substances as a principal element (40 C.F.R. §300.430(e)(3)(i)) and to develop innovative treatment technologies where practicable (40 C.F.R. §430(e)(5)). The Mercury Refining property is approximately one-half acre in size and is bordered by a creek and an active railroad. To reach

²Note that under the revised *de minimis* settlement, the *de minimis* parties account for 23% of the Contributing Waste to the Site.

and excavate contaminated soil which extends to a depth of approximately 60 feet, either specially designed retaining walls would have to be installed or the buildings on-Site would have to be removed at great cost. For these reasons, as well as information obtained about general Site conditions, EPA sought to determine if EK, an innovative technology, would be effective in remediating Site soils in-situ. EK offers the potential for permanently removing mercury from the soil. If successful it would have also eliminated future costs associated with monitoring, institutional controls and operation and maintenance. Such costs are inevitable with other in-situ treatment technology such as solidification/stabilization.

Beginning in 2005, EPA worked with Dr. Mark Bricka, a professor of Chemical Engineering at Mississippi State University, and an expert on EK, to plan and implement a bench scale study to determine whether EK could successfully mobilize mercury in soil from the Mercury Refining Site. The bench scale study utilized soil and groundwater taken from the Site to best simulate Site conditions. Dr. Bricka completed a final bench scale treatability study report in May 2007. The report indicates that EK would likely be effective in remediating Site soils. Because the bench scale study indicated that EK could be effective, it was retained for detailed analysis in the FS. However, as discussed in the Proposed Plan and the ROD, EPA decided that on balance, EK would not be the best remedial action for the Site, primarily because of its greater cost.

The commentor also suggested that EPA not rule out excavation as a remedial alternative for the Site. In fact, the chosen remedy includes an excavation component for unsaturated soils exceeding the cleanup level. The Site's small size (about one-half acre), and the fact that it is bordered by a creek and a railroad has resulted in EPA ruling out excavation of soils in the saturated zone. Soil in this zone must be remediated since it can present a future risk to human health at the Site.

15. Comment: EPA should include a 're-opener' for remedy failure in the *de minimis* settlement, as it may select electrokinetics ("EK"), an innovative technology, as the remedy for the Site.

EPA also failed to apply "adjustment factors" in calculating the 'premium' – EPA's guidance "Standardizing *De Minimis* Premiums" – calls for inclusion of a cost re-opener when the range of possible site costs is extremely broad. EPA must use adjustment factors when there is an unusually high level of uncertainty regarding remedy costs, including the possibility of remedy failure. In addition, EPA did not include an explanation of which "adjustment factors," if any, were considered and a description of the adjustment factors' effect on the 'premium' decision.

Response: EPA's decision not to include a *de minimis* cost 're-opener' would be appropriate regardless of whether EK is the chosen remedy because the *de minimis* settlement includes a 100% premium. EPA's July 7, 1995 guidance, "Standardizing the De Minimis Premium" directs regions to consider a 100% premium when no cost re-opener is included in the settlement whether the settlement is reached pre-ROD or post-ROD. This guidance also states that if the presumptive premium of 100% (for settlements with no cost reopeners) is not utilized,

certain site-specific adjustment factors may be used to determine an appropriate premium. Since EPA utilized the presumptive 100% premium, it was unnecessary to apply the adjustment factors (remedy costs, magnitude of orphan share and waste allocation) nor would it have likely changed the outcome. None of the adjustment factors were “sufficiently outside the normal range that the use of the presumptive premium would be considered inappropriate.” (“Standardizing the De Minimis Premium”, p.6.) As stated previously, the original *de minimis* settlement offer was prepared after the RI was complete when the extent of contamination and the media to be addressed was known. EPA accounted for the range of possible site costs by taking the average cost of the two likeliest remedial alternatives and including costs associated with cleanup in the I-90 Pond even though no determination was made as to whether such a cleanup was necessary. EPA believed that the 100% premium would more than cover any possibility of remedy failure. (Note that as discussed below, the revised *de minimis* settlement offer is based on a future cost estimate for the remedy selected in EPA’s Record of Decision for the Site and still includes a 100% premium.) In any event, EPA does not believe it is appropriate to consider the magnitude of the orphan share in setting the premium because the orphan share is borne among all PRPs at the Site and all PRPs that settle will receive the benefit of the orphan share compensation consistent with EPA’s orphan share guidance. Nor does EPA believe it is appropriate to adjust the premium based on the relative uncertainty in the waste allocation since there was minimal uncertainty about the quantity or the toxicity of the waste contributed to the Site by the PRPs.

16. Comment: EPA’s selection of a highly uncertain and unproven remedial technology, *i.e.*, EK, shifts to ‘the Group’ the risk that the remedy will be more expensive than anticipated. EPA’s 1995 guidance document states that *de minimis* settlements contain few re-openers “but otherwise shift to EPA and other PRPs the risk that the remedy will be more expensive than anticipated.” This is unfair.

Response: Now that EPA has selected a remedy for the Site, the revised settlement offer is based on cost estimates in the ROD. Consistent with EPA guidance and the statutory preference for early *de minimis* settlements, EPA is aware that this approach has the potential for shifting the risks among the PRPs.

17. Comment: EPA should revise sections of the *de minimis* AOC to clarify that the *de minimis* settlement does not cover any possible remediation which may someday be required in Patroon’s Creek and the I-90 Pond. EPA does not anticipate future remediation in these areas because it can not link contamination in these areas to the Site. The AOC is not clear on this and appears to provide a broader covenant. Specifically a commentor suggests changes to the following sections of the AOC:

A. Section II, Statement of Purpose should be revised to state that the AOC is intended to be a final settlement between parties and EPA with regard to the Site and for response costs to be incurred at the Site...” and eliminate reference to “at or in connection with the Site”

B. The definition of 'Site' should be amended to include the following language – The “Site does not include any portion of Patroon Creek or the I-90 Pond extending beyond property owned by Mercury Refining Company...”

C. Section XI, 'Reservation of Rights' should be amended to include a reservation for liability for contamination of Patroon Creek or the I-90 Pond.

D. Section XIII, 'Effect of Settlement' should be revised to specifically exclude potential liability for contamination in Patroon Creek or I-90 pond ... from the “matters addressed”.

Response: EPA does not believe that it is necessary to include the suggested changes in the revised settlement document. EPA carefully studied the Unnamed Tributary, Patroon Creek and I-90 Pond and while it has determined that certain sediments in the Unnamed Tributary need to be cleaned up, no cleanup will be necessary in the I-90 Pond or Patroon Creek. The ROD calls for sampling of fish, surface water and sediments in Patroon Creek, the Unnamed Tributary and the I-90 Pond to assess impacts on the biota on an annual basis for five years and thereafter depending on the first five years of data. The cost of this sampling is included in the cost of the remedy and therefore included in the revised cost estimate for the revised *de minimis* settlement. If, in the unlikely event additional work is required due to changed conditions, EPA believes that the premium to be paid by the *de minimis* parties is more than sufficient to cover their respective share of this potential cost.

18. Comment: EPA's allocation of liability was based solely on a waste-in calculation without any consideration of the dates that the *de minimis* PRPs sent mercury and/or mercury bearing materials to the Site.

A. EPA's RI Report and other technical documents (received from DEC) indicate that contaminant levels at the Site either stayed the same or decreased after Mereco installed a new retort oven and container storage building in 1993. There is no evidence of violations or spills after 1993 and elemental mercury was confirmed at depths underlying the footprint of the former retort facility at the Site. The RI showed no change in the concentration or distribution of mercury at the Site that can be attributed to releases occurring after 1993, therefore substances brought after 1993 had no hazardous effect (CERCLA §122(g)(1)(A)(ii)).

B. Review of the Site history, remedial actions at the Site, sampling events and field observations of surface soil, sub-surface soil and sediments lead to the conclusion that most impacts described in the RI Report were present due to releases that occurred prior to the remedial actions and the operational improvements made by Mereco in 1985, 1989 and 1993.

C. The Third Third Land Ban Rule required that all mercury-containing RCRA wastes be retorted. The commentor's predecessor, with others, petitioned for emergency rulemaking to amend the treatment standard due to lack of retort facilities and due to fact that those

that existed were known to be contaminated sites. EPA denied the petition and ENSCO [the commentor] was required to send its RCRA wastes (mercury) to Mereco.

D. The timing of the contribution of mercury to the Site is critical for determining the hazardous effects of the substances contributed by a party (CERCLA §122(g)(1)(A)(ii)).

E. The majority of the cleanup costs should be placed on parties that sent waste before 1993. Ignoring this factor is unfair and places an unjustifiable burden on the parties that sent waste to the Site after 1993.

F. The parties that contributed materials to the Site after 1993 should qualify as *de minimis* parties regardless of their contribution by weight. This would be fair and consistent with EPA guidance and CERCLA §122(g)(1)(A)(ii).

Response: While EPA does not disagree that much of the contamination occurred before the container storage building was built and the new retorts were operational, we also know that until the new retorts were operational releases from the retorts continued unabated. These releases were directly from the stack as well as from mercury re-condensing on the walls of the building and sliding down the side walls onto the ground. As the ROD indicates, the bulk of the contamination that will be addressed in the remedial action lies in the immediate vicinity of the old retort building and surficially in a broader area. Thus, while the occurrence of spills leading to releases to the environment from storage of MCM in the new container storage building was probably diminished, our concern is really more the releases from the old retorts. EPA conducted a further investigation into Site operations and determined that after February 15, 1994 (not 1993 as the commentor states) the new retorts began operation. EPA reviewed documents and spoke with both NYSDEC and EPA employees who had occasion to inspect the Mereco facility between February 1994, when the new retort became operational, through May 1998 when Mereco ceased processing mercury. While there were some very minor releases which were reported on Mereco's Toxic Release Inventory after the new retorts were operational, EPA's investigation found no further information showing that mercury brought to the Site from February 1994 through May 1998 contributed to the contamination that needs to be remediated at the Site. Since the TRI shows some evidence of releases after February 1994 and because Section 107(a)(3) of CERCLA, 42 U.S.C. 9607(a)(3) holds liable "any person who by contract, agreement or otherwise arranged for disposal or treatment ... of hazardous substances" at a facility, and the same hazardous substances (in this case mercury) is present at the Site, for settlement purposes only, EPA has amended the waste-in list to discount the amount of MCM brought to the Site from February 15, 1994 through May 1998 by 85%. As a result, rankings have changed and certain parties that were major parties are now *de minimis*. (see attached revised settlement offer).

As to the comment that EPA should adjust the waste-in list for waste sent to the Site after the 1985 clean-up, for the foregoing reasons, EPA does not agree that conditions and practices at the Site changed after the 1985 cleanup, as suggested in the comment, to warrant any reduction for waste brought to the Site after that date.

With respect to the comment regarding EPA's denial of the petition for emergency rulemaking to amend the treatment standard under the Third Third Land Ban Rule, neither EPA's denial of that petition, nor the rule itself, required that mercury-containing waste be sent to Mereco; only that it be retorted. Contrary to the commentor's assertion, EPA did not require parties to use the Mereco facility and its MCM could have been sent elsewhere.

EPA disagrees with the comment that the timing of the contribution of mercury is a toxicity issue under Section 122(g)(1)(A)(ii) of CERCLA because all hazardous substances analyzed were mercury. The real issue is whether the mercury sent to the Site after February 1994 contributed to the contamination driving the response action.